

RECEIVED PRO

AUG 28 2014

LAND APPLICATION OF BIOSOLIDS
RICHARD REYNOLDS

GO30 (FIELDS 1 – 8)
GOOCHLAND COUNTY, VIRGINIA
JULY 2013



June 28, 2013

Mr. Seth Mullins
Dept. of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

Dear Mr. Mullins:

Transmitted herein for your consideration is land application site for Richard Reynolds (designated as GO 30, fields 1-8) located in Goochland County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink that reads "D. Steve McMahon". The signature is fluid and cursive, with the first name "D." and last name "McMahon" clearly legible.

D. Steve McMahon
Sr. Technical Services Director

/cmw



FIELD SUMMARY SHEET

Richard Reynolds

GO30

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
GO30 - 01	44.5	42.2	None	None	Perkinsville	Derenda & Richard Reynolds
GO30 - 02	38.9	38.9	None	None	Perkinsville	Derenda & Richard Reynolds
GO30 - 03	20.9	19.9	None	None	Perkinsville	Derenda & Richard Reynolds
GO30 - 04	24.0	24.0	None	None	Perkinsville	Derenda & Richard Reynolds
GO30 - 05	20.7	20.5	None	None	Perkinsville	Derenda & Richard Reynolds
GO30 - 06	112.7	109.5	None	None	Perkinsville	Ray Reynolds Trustees
GO30 - 07	16.7	15.8	None	None	Perkinsville	Ray Reynolds Trustees
GO30 - 08	29.5	27.4	None	None	Perkinsville	Ray Reynolds Trustees
TOTALS:	307.9	298.2				

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 5-15-13 between RICHARD R. REYNOLDS 2012 IRREVOCABLE TRUST referred to here as "Landowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Gooseland, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>54-1-0-8-0</u>			
<u>[REDACTED]</u>			
<u>[REDACTED]</u>			
<u>54-1-0-10-0</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

<u>DERENDA H. REYNOLDS - TRUSTEE</u>	<u>[Signature]</u>	<u>2121 River Road West</u>
<u>Richard R. Reynolds</u>	<u>Richard R. Reynolds</u>	<u>MAIDENS, VA 23102</u>
Landowner - Printed Name, Title	Signature	Mailing Address

Permittee:

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

<u>D. Steve McMahon</u>	<u>[Signature]</u>	<u>10647 Tidewater Trail</u>
<u>Permittee - Authorized Representative</u>	<u>Signature</u>	<u>Champlain, VA 22438</u>
Printed Name		Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro

County or City: Goochland Co.

Landowner: ~~Dr.~~ Richard Reynolds 2012 IRREVOCABLE TRUST

DERENDA H. REYNOLDS TRUSTEE

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Derenda H. Reynolds
Landowner's Signature

Trustee

5/20/13
Date

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Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
54-1-0-9-0			
54-1-0-9-0			
54-1-0-14-0			
54-1-0-14-0			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
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<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No
<u>RICHARD R. REYNOLDS</u>	<u>Richard Reynolds</u>	<u>Richard Reynolds</u>	<u>2121 RIVER ROAD WEST</u>
Landowner - Printed Name, Title	Signature	Title	Mailing Address
			<u>MAIDENS, VA 23102</u>

Permittee:

Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

<u>D. Steve McMahon</u>	<u>D. Steve McMahon</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		<u>Champlain, VA 22438</u>

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

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County or City: Goochland Co.

Landowner: DR. Richard Reynolds

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Richard Reynolds
Landowner's Signature

5/20/13
Date

Tax ID Landowner Identification Sheet

Landowner	Field #	Tax ID
Derenda & Richard Reynolds	30 - 01	54-1-0-14-0
Derenda & Richard Reynolds	30 - 02	54-1-0-14-0
Derenda & Richard Reynolds	30 - 03	54-1-0-9-0
Derenda & Richard Reynolds	30 - 04	54-1-0-9-0
Derenda & Richard Reynolds	30 - 05	54-1-0-9-0
Ray Reynolds Trustees	30 - 06	54-1-0-8-0
Ray Reynolds Trustees	30 - 07	54-1-0-8-0
Ray Reynolds Trustees	30 - 08	54-1-0-8-0
		54-1-0-10-0

Field #	Latitude (north)	Longitude (west)
30 - 01	37 ^O 38' 43.02"	77 ^O 50' 53.39"
30 - 02	37 ^O 38' 34.46"	77 ^O 50' 26.34"
30 - 03	37 ^O 38' 41.67"	77 ^O 50' 22.45"
30 - 04	37 ^O 38' 53.40"	77 ^O 50' 19.80"
30 - 05	37 ^O 38' 59.72"	77 ^O 50' 38.27"
30 - 06	37 ^O 39' 12.10"	77 ^O 50' 23.76"
30 - 07	37 ^O 39' 07.88"	77 ^O 50' 05.22"
30 - 08	37 ^O 39' 00.46"	77 ^O 50' 22.85"



TAX MAP



Farm Summary Report

Plan: **New Plan** **Fall, 2013 - Winter, 2014**

Farm Name: **GO 30**
Location: Goochland
Specialist: D. Steve McMahon
N-based Acres: 298.9
P-based Acres: 0.0

Tract Name: **GO 30**
FSA Number: 0
Location: Goochland

Field Name: **01**
Total Acres: 44.50 Usable Acres: 42.20
FSA Number: 0
Tract: GO 30
Location: Goochland
Slope Class: A Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 02
Total Acres: 38.90 Usable Acres: 38.90
FSA Number: 0
Tract: GO 30
Location: Goochland
Slope Class: A Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 03
Total Acres: 20.90 Usable Acres: 20.40
FSA Number: 0
Tract: GO 30
Location: Goochland
Slope Class: B Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 04
Total Acres: 24.00 Usable Acres: 24.00
FSA Number: 0
Tract: GO 30
Location: Goochland
Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 05
Total Acres: 20.70 Usable Acres: 20.50
FSA Number: 0
Tract: GO 30
Location: Goochland
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 06

Total Acres: 112.70 Usable Acres: 109.70

FSA Number: 0

Tract: GO 30

Location: Goochland

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Field Name: 07

Total Acres: 16.70 Usable Acres: 15.80

FSA Number: 0

Tract: GO 30

Location: Goochland

Slope Class: D Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:*Environmentally Sensitive Soils due to:**Soils with perent slope in excess of 15%*

Field Name: 08

Total Acres: 29.50 Usable Acres: 27.40

FSA Number: 0

Tract: GO 30

Location: Goochland

Slope Class: D Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with perent slope in excess of 15%

Environmentally Sensitive Areas

Field	Reason for Sensitive Area
30-01	High Water Table (Map Unit 23 – 52%) Flooded Soils (Map Unit 23 – 52%)
30-02	High Water Table (Map Unit 23 – 61%) Flooded Soils (Map Unit 23 – 61%)
30-03	High Water Table (Map Unit 23 – 95%) Flooded Soils (Map Unit 23 – 95%)
30-04	None
30-05	None
30-06	High Water Table (Map Unit 23 – 5%) Flooded Soils (Map Unit 23 – 5%)
30-07	None
30-08	None

Goochland County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
5	Buncombe		Feb – June	Leaching
7B, 7C	Colfax	Nov – Jan		
8B, 8B2, 8C, 8C2	Creedmoor	Jan – March		
12	Forestdale	Jan – March	Jan – April	
16B2, C2, D2, E2	Louisburg			Leaching
23	Monacan	Nov – May	Nov – May	
24	Monacan	Nov – May	Nov – May	
26B, 26C	Orange	Dec – May		
31C2, E2,	Pinkston			Leaching
32D2	Pinkston			Leaching
33	Roanoke	Nov – June	Nov – June	
34B, 34C	Sedgefield	Jan – March		
46	Wehadkee	Nov – June	Nov – June	

MAP LEGEND



House/Dwelling with a well



Rock Outcrop



Well



Lake/Pond



Slope which exceeds 15%



Intermittent Stream



Stream/River



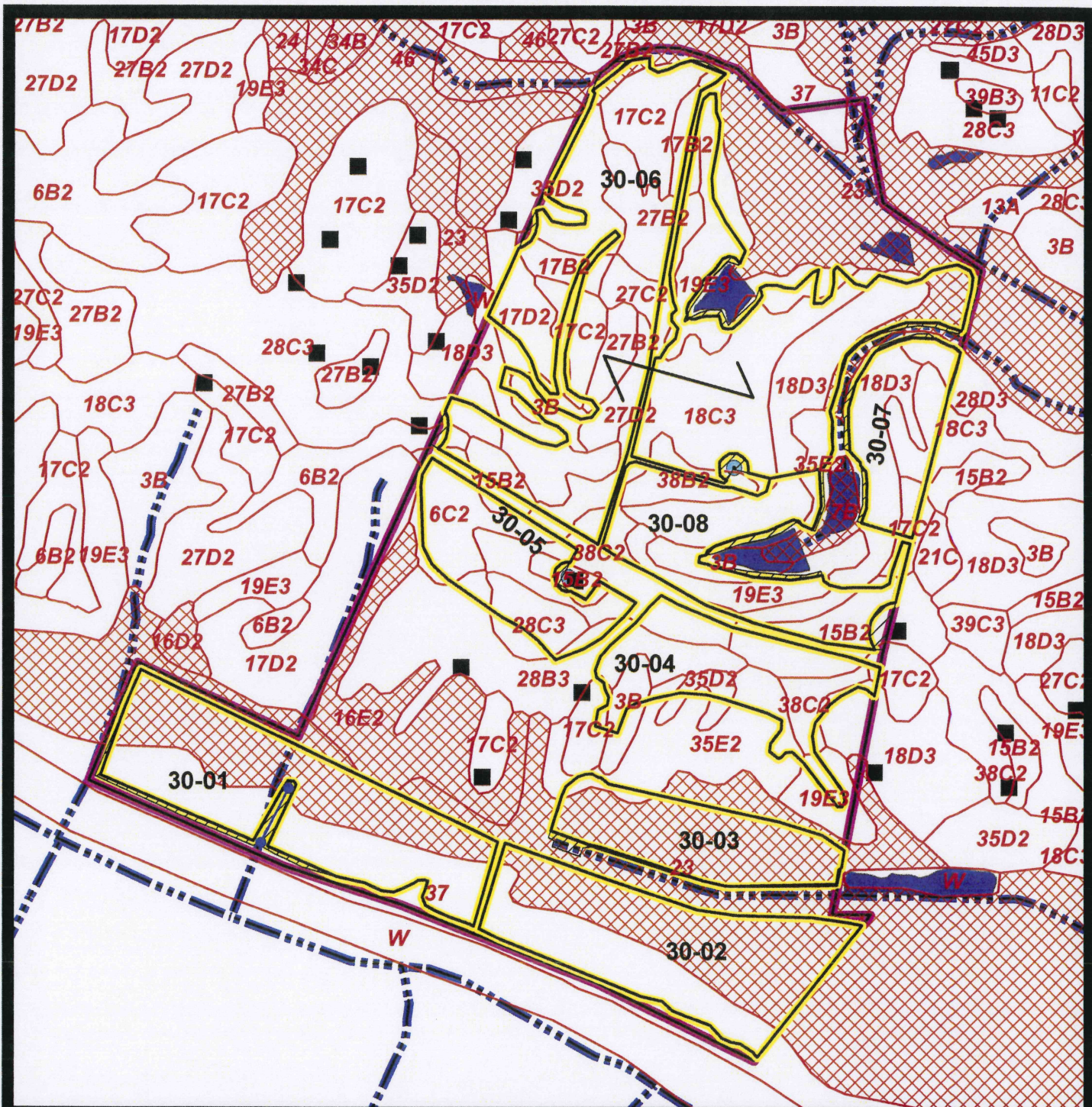
Agricultural/Drainage Ditch



Field boundary




Property Line



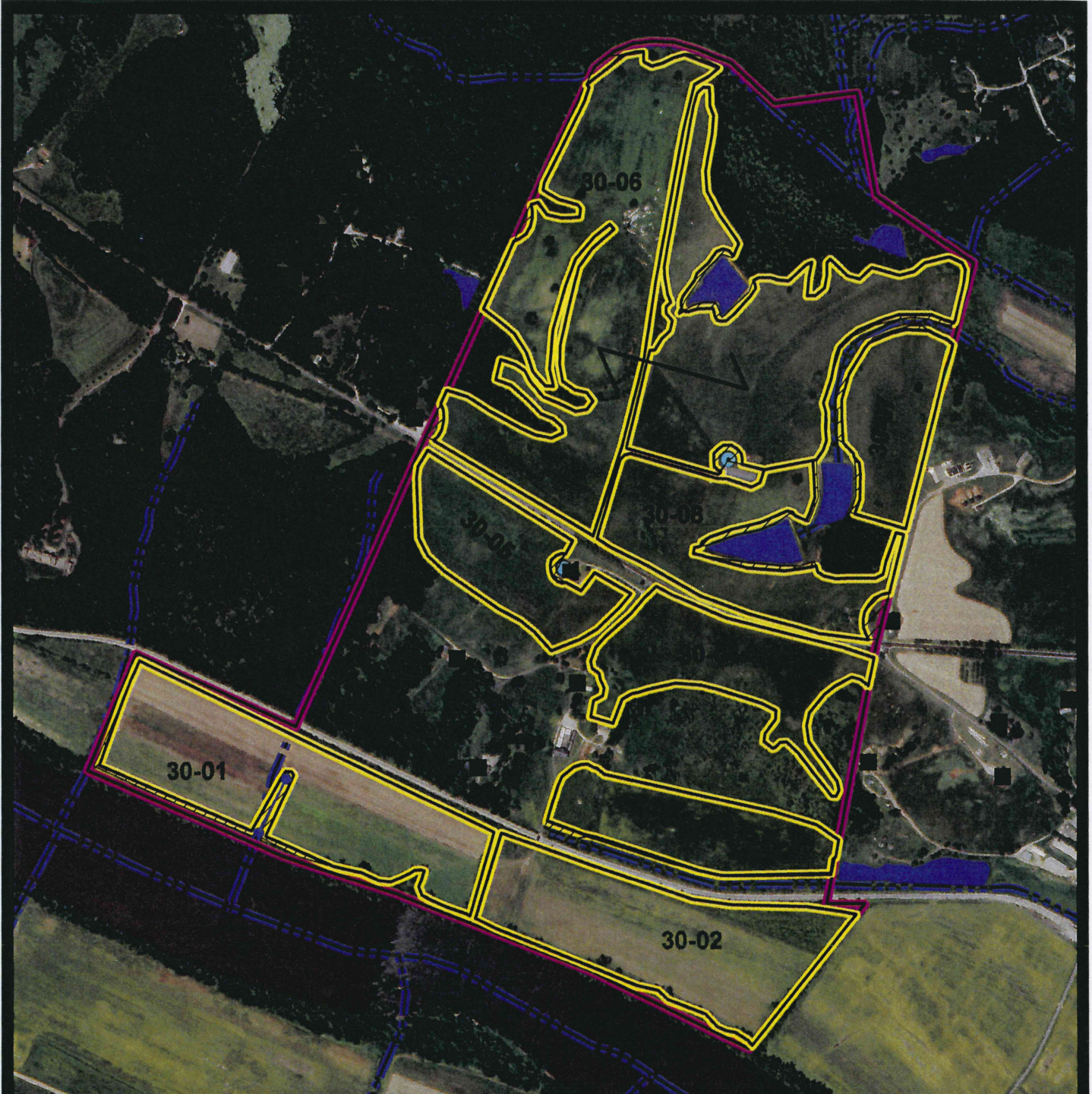
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Revised 01/31/2014

SOIL MAP

 Environmentally Sensitive Areas



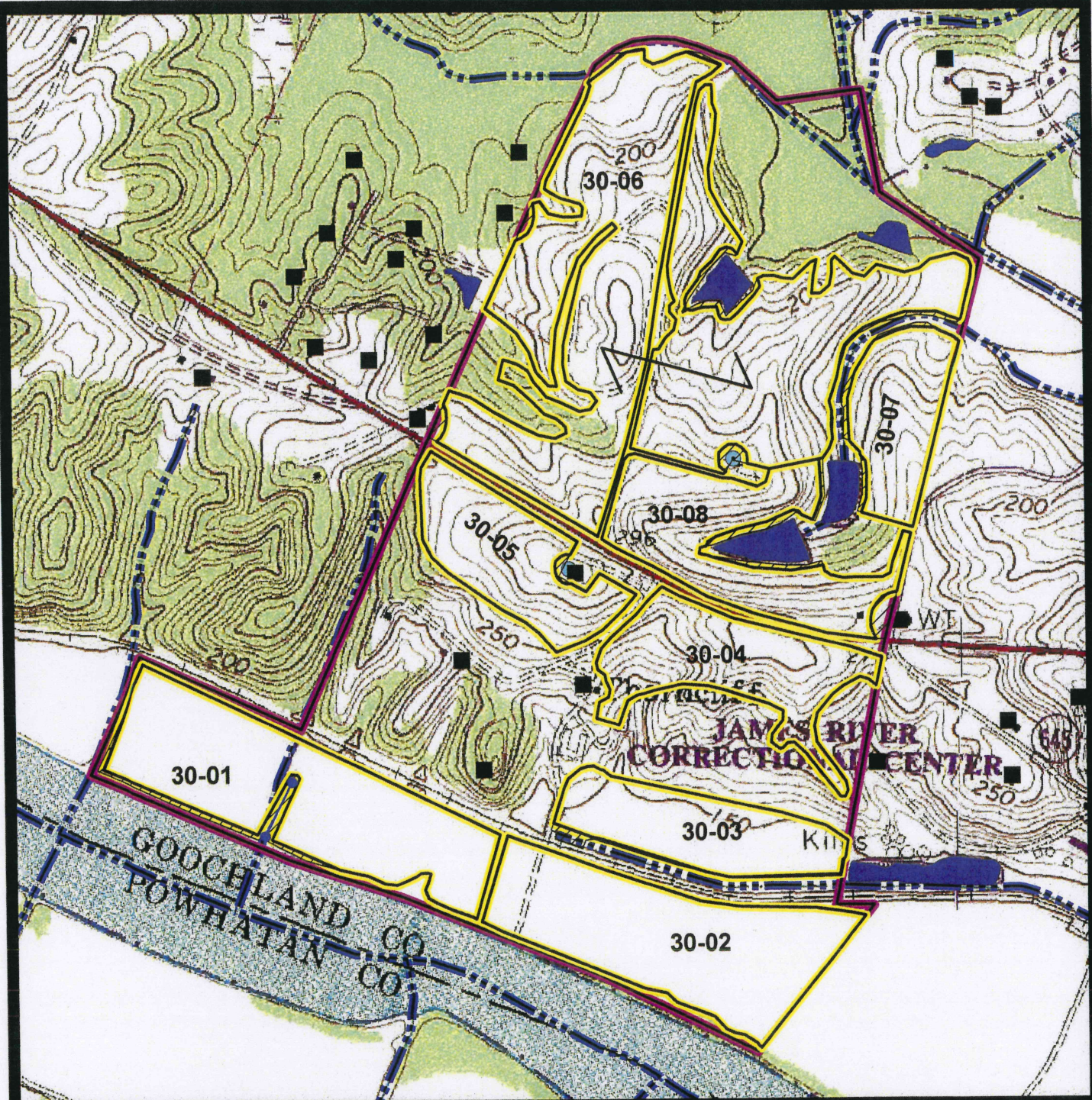


SCALE 1:12,000

Revised 01/31/2014

AERIAL MAP

□
N
□



SCALE 1:12,000

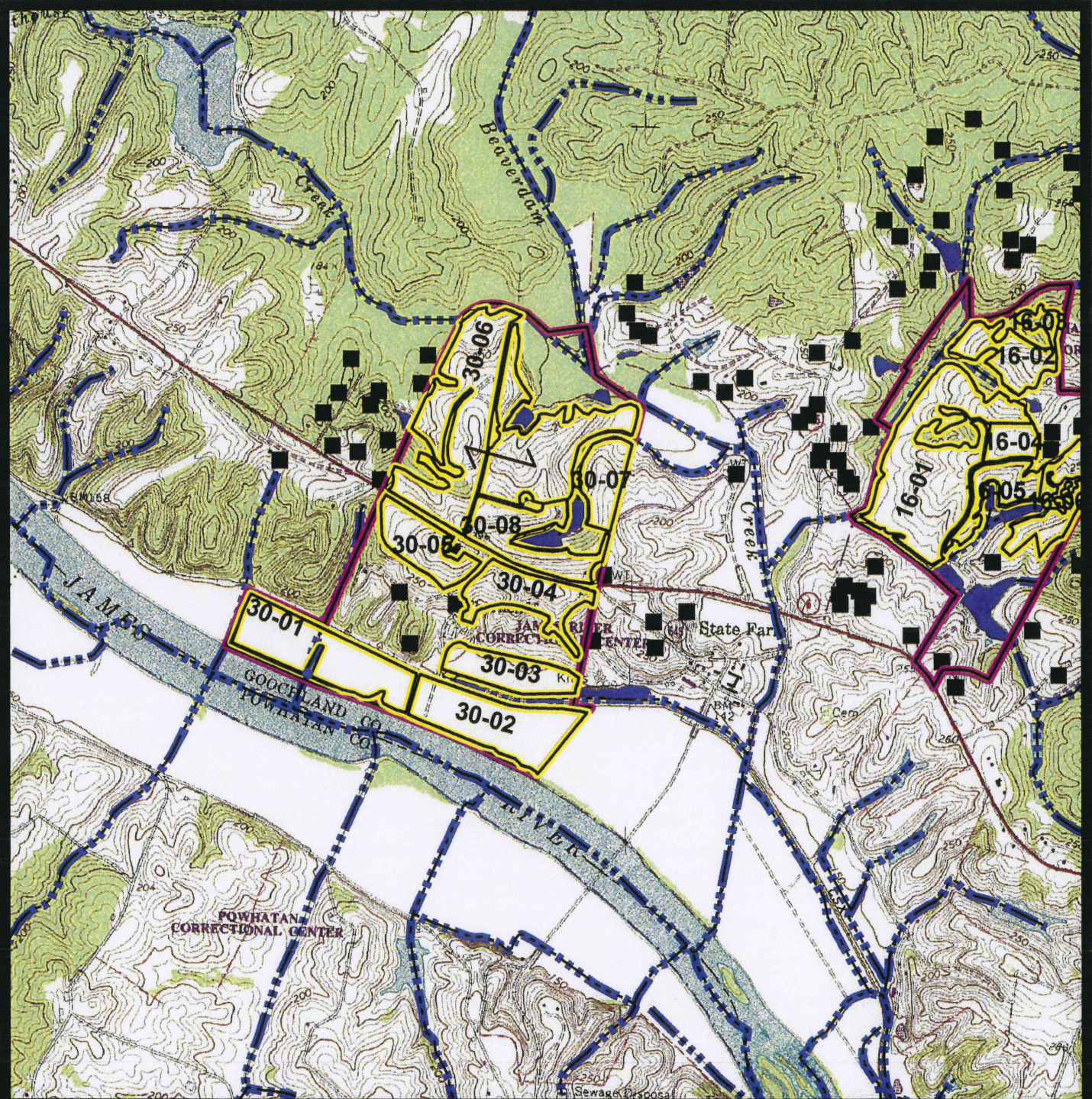
Revised 01/31/2014

TOPO MAP

Field #	Gross Acres
30-01	44.5
30-02	38.9
30-03	20.9
30-04	24.0

Field #	Gross Acres
30-05	20.7
30-06	112.7
30-07	16.7
30-08	29.5



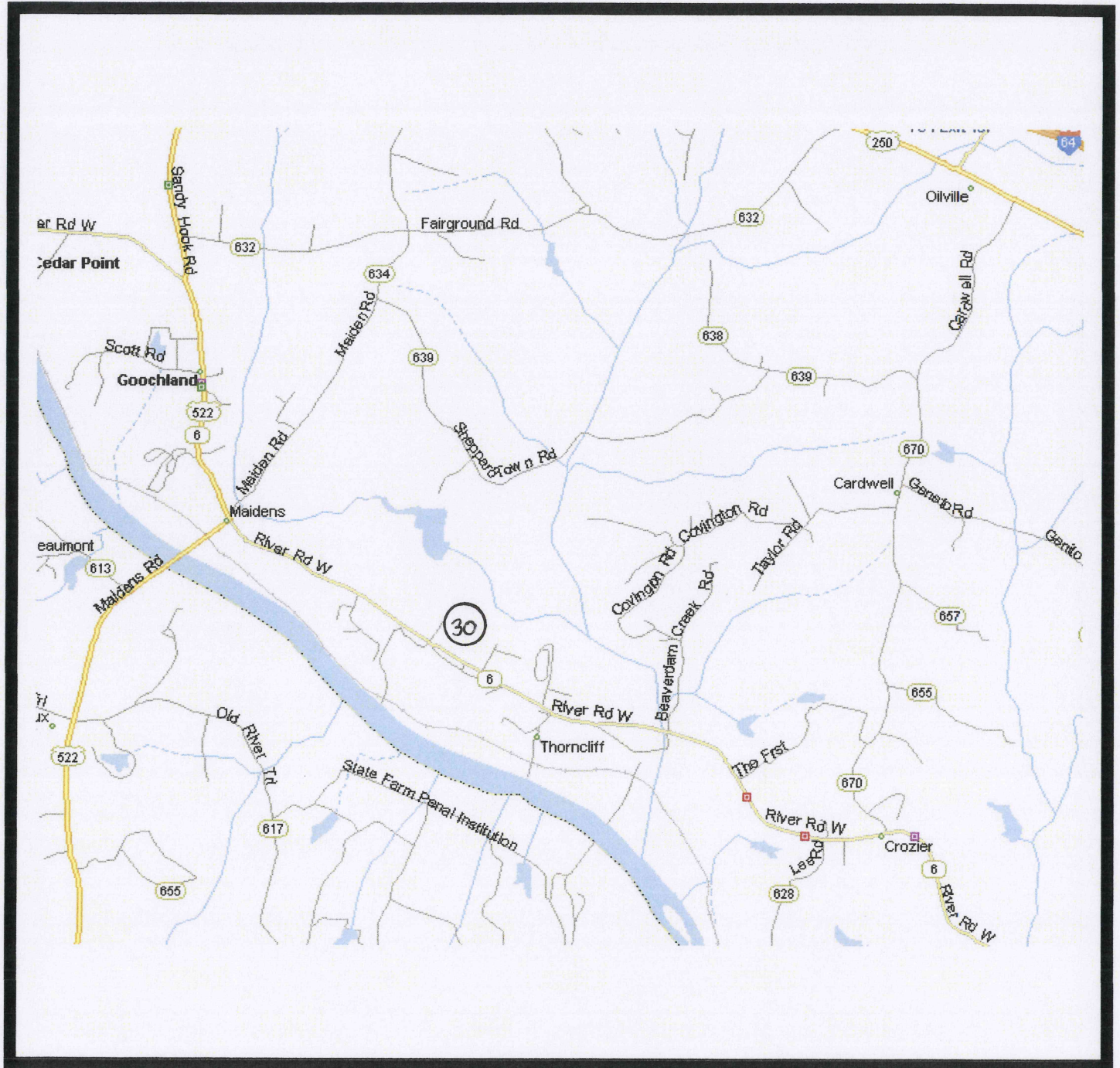


SCALE 1:24,000

Revised 01/31/2014

TOPO MAP





LOCATION MAP

